PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant' s or agent' s file reference 5869-040	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/US04/37406	International filing date *(day/month/year)* 10 November 2004 (10.11.2004)	Priority date *(day/month/year)* 11 November 2003 (11.11.2003)
International Patent Classification (IPC) or national classification and IPC IPC(7): H04M 1/00 and US Cl.: 455/79		
Applicant MATECH, INC.		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 7 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
   a. ☐ *(sent to the applicant and to the International Bureau)* a total of ___ sheets, as follows:
      ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) ____ , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒	Box No. I	Basis of the report
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☒	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
03 May 2005 (03.05.2005)	29 September 2005 (29.09.2005)
Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Lewis G. West Telephone No. 571-272-2600

Form PCT/IPEA/409 (cover sheet)(April 2005)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US04/37406

Box No. I Basis of the report

1. With regard to the language, this report is based on:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into English, which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4(a))
- ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☒ the international application as originally filed/furnished

☒ the description:
pages 1-16 as originally filed/furnished
pages* NONE received by this Authority on
pages* NONE received by this Authority on

☒ the claims:
pages 17-20 as originally filed/furnished
pages* NONE as amended (together with any statement) under Article 19
pages* NONE received by this Authority on
pages* NONE received by this Authority on

☒ the drawings:
pages 1/12-12/12 as originally filed/furnished
pages* NONE received by this Authority on
pages* NONE received by this Authority on

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

** If item 4 applies, some or all of those sheets may be marked "superseded."*

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US04/37406

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 7-9,15	YES
	Claims 1-6,10-14,16	NO
Inventive Step (IS)	Claims NONE	YES
	Claims 1-16	NO
Industrial Applicability (IA)	Claims 1-16	YES
	Claims NONE	NO

2. Citations and Explanations (Rule 70.7)
Please See Continuation Sheet

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

The description is objected to as containing the following defect(s) under PCT Rule 66.2(a)(iii) in the form or contents thereof: item 9 is referred to as both PTTSW and PPTSW, which is assumed to be typographical error, as both seem to refer to the same push to talk switch. Correction is required.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

V. 2. Citations and Explanations:
Claims 1-6, 10-14 and 16 lack novelty under PCT Article 33(2) as being anticipated by Day.

Regarding claim 1, Day discloses a communication device comprising: a wireless part including a wireless transmitter and wireless receiver; a transmitter/receiver part including a receiver circuit for processing a reception signal received by the wireless receiver and a transmitter circuit for processing a transmission signal transmitted by the wireless transmitter; and a control part selectively connecting the wireless transmitter to the transmitter circuit and selectively connecting the wireless receiver to the receiver circuit according to a switched stand-by mode and communication mode, the control part further including a tone generator configured to output an activation tone on the transmission signal when switched to the communication mode, the activation tone automatically causing a handset receiving the transmission signal to switch from a reception mode to a reception and transmission mode.

Regarding claim 2, Day discloses the communication device according to claim 1, wherein the control part output a first activation tone on the transmission signal for a predetermined time and at a first frequency after switching to the communication mode causing the handset to switch to the reception and transmission mode, the control part outputting a second tone on the transmission signal for a predetermined time at a second frequency after switching back to the stand by mode causing deactivation of the handset transmission mode.

Regarding claim 3, Day discloses the communication device according to claim 1 wherein the control part includes a push to talk switch that upon being pressed automatically activates the tone generator and automatically activates a power source in the wireless transmitter.

Regarding claim 4, Day discloses a communication device, comprising: transmitter circuitry for transmitting a wireless transmission signal; receiver circuitry for receiving a wireless reception signal; and control circuitry selectively switching the transmitter and receiver circuitry between a standby mode where only the wireless receiver circuitry is operational and a communication mode where both the receiver circuitry and the transmitter circuitry are operational, the control circuitry including a tone detector that

automatically causes the control circuitry to switch from the standby mode to the communication mode when a activation tone is detected in the reception signal.

Regarding claim 5, Day discloses the communication device of claim 4 wherein the tone detector automatically switches to the communication mode when a first activation frequency tone is detected in the reception signal and automatically switches to the standby mode when a second deactivation frequency tone is detected in the reception signal.

Regarding claim 6, Day discloses the communication device according to claim 4 including a voice detector automatically causing the control circuitry to switch from the standby mode to the communication mode when a voice signal is received by the transmitter circuitry and automatically causing the control circuitry to switch back to the stand-by mode when no voice signal has been received for a predetermined amount of time.

Regarding claim 10, Day discloses the communication device according to claim 4 including an antenna switching circuit automatically connection an antenna to the receiver circuitry during the standby mode and automatically connecting the antenna to the transmitter circuitry during the communication mode.

Regarding claim 11, Day discloses a half-duplex wireless communication device, comprising: a wireless section including a wireless receiver for receiving a wireless reception signal and a wireless transmitter for transmitting a wireless transmission signal; a transmitter receiver section that includes a receiver section for outputting the reception signal as an audio output signal and a transmitter section for converting an audio input signal in to the transmission signal supplied to the wireless transmitter; and a control section switching between a standby mode where the wireless receiver is coupled to the receiver section and the wireless transmitter is powered off an disconnected form the transmitter section and a communication mode where the receiver is coupled to the receiver section and the wireless transmitter is powered on and coupled to the transmitter section, the control section automatically switching from the standby mode to the communication mode when a voice signal is detected in the transmission signal.

Regarding claim 12, Day discloses the communication device according to claim 11 wherein the control section automatically switches back to the standby mode when no voice signal is detected in the transmission signal for a predetermined period of time.

Regarding claim 13, Day discloses the communication device according to claim 11 wherein the control section automatically switches from the standby mode to the communication mode when a first predetermined frequency tone is detected in the reception signal.

Regarding claim 14, Day discloses the communication device according to claim 13 wherein the control section automatically switches from the communication mode back to the standby mode when a second predetermined frequency tone is detected in the reception signal.

Regarding claim 16, Day discloses the communication device according to claim 11 wherein the control section includes a first switch coupled between the wireless receiver and the receiver section, a second switch coupled between the wireless transmitter and the transmitter section, and a transmission/reception switch controller that shuts the first switch and opens the second switch during the standby mode and shuts both the first and second switch during the communication mode.

Claims 7-8 and 15 lack an inventive step under PCT Article 33(3) as being obvious over Day in view of Akiyama.

Regarding claim 7, Day discloses the communication device according to claim 4 but does not disclose using a single dual operation transducer. Akiyama discloses a radio device including a transducer coupled between the transmitter circuitry and the receiver circuitry configured to operate as both a microphone and a speaker. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a dual-purpose transducer in order to save cost as well as reduce size and weight.

Regarding claim 8, the combination of Day and Akiyama discloses the communication device according to claim 7 including a first noise filter coupled between the transducer and the transmitter circuitry and a second noise filter coupled between the transducer and the receiver circuitry.

Regarding claim 15, Day discloses the communication device according to claim 11, but does not expressly disclose a single transducer, Akiyama discloses a radio device wherein the transmitter section and the receiver section comprise a single transducer configured a first amplifier coupled between the wireless receiver and a first the transducer and a second amplifier coupled between the wireless transmitter and the transducer. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to make a single dual-purpose transducer in order to save cost as well as reduce size and weight, and it would have been an obvious design choice to make the transducer insertable in the ear to make the device hands free.

Claim 9 lacks an inventive step under PCT Article 33(3) as being obvious over Day in view of Bogut.

Supplemental Box

Regarding claim 9, Day discloses the communication device according to claim 4, but does not expressly discloses a photo switch. Bogut discloses a PTT radio device including a photo-switch coupled between the control circuitry and a power source activation signal in the transmitter circuitry. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to reduce susceptibility to interference.

Claims 1-16 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

---------- NEW CITATIONS ----------

NONE